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ABSTRACT

The paper focused on the efficacy of career education programs in areas other than academic achievement, career awareness, and career decision making. Forty-one career education projects, mainly supported by Vocational Education Act funds, were surveyed to identify the student effects of: (1) self-awareness, (2) career exploration, (3) occupational preparation and job placement, and (4) general attitudes toward career education. Tentative conclusions were: a positive influence on students' self-concept, particularly in the primary grades; different responses of elementary and junior high students to career exploration activities; no efforts to measure the effectiveness of occupational preparation and job placement programs; and generally positive student response of K-12 career education programs. Caution is suggested in examining conclusions due to the lack of true experimental evaluation designs, the ambiguous and often imprecise objectives of different career education components, and the lack of systematic identification of particular activities with particular student outcomes. Evaluation efforts of the projects in the study sample focused chiefly on process evaluation to demonstrate career education's effectiveness as an educational reform movement. Copies of survey forms and a list of participating career education projects are appended. (EA)

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THE EFFICACY OF CAREER EDUCATION:

OTHER WAYS OF ASSESSING EFFECTIVENESS

Written for

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By Cherylynn Risch Schager
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THE EFFICACY OF CAREER EDUCATION:
OTHER WAYS OF ASSESSING EFFECTIVENESS

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THE EFFICACY OF CAREER EDUCATION:

OTHER WAYS OF ASSESSING EFFECTIVENESS

In addition to measuring students' career awareness, their academic achievement and their career decision-making skills, there are a number of other possible ways of assessing the effectiveness of career education. One such way is to examine the effects of self awareness programs which attempt to help students understand their own abilities, interests and values. The success of occupational preparation programs in teaching entry level job skills and the success of schools' job placement efforts are other ways worth investigating. Only after data pertaining to all these program components are collected and analyzed, will it be possible to pass judgment on comprehensive career education's success as a model for instructional programming.

Since 1971, the U.S. Office of Education, state boards of education and school district practitioners have worked hard to arrive at a common definition of the concept of career education. There is now considerably more understanding of and agreement about what that concept is. There is also beginning to be more agreement about what comprehensive career education is <u>in actual practice</u>. The terms, career awareness, career exploration, career decision-making and the other career development components have come to represent fairly uniform sets of activities to the career educator, regardless of his location. What still is unclear, however, is what constitutes an <u>effective</u> or a <u>successful</u> career education effort.

What evidence an educator produces to attest to the success of a given educational program is generally a good indicator of the real goals s/he wanted to accomplish, regardless of what the written goals and objectives were that appear on the program's dissemination materials. In career education to

date, there seem to be at least two sets of goals, those which describe anticipated student outcomes (products) and those which describe proposed program activities (processes). Current evaluation theory defines goals and objectives as standards for measuring the effectiveness of a given program effort. Applying this definition to career education, the implication is that there are two ways to judge the efficacy of career education: (1) "Program XYZ will be considered a success if participating students demonstrate behaviors A, B and C," and (2) "Program XYZ will be considered successful if teachers, administrators and program staff do tasks A, B and C." These two sets of standards are not in any way contradictory, but their simultaneous existence raises the question as to which set currently has priority in the minds of career education practitioners.

Those career educators who produce evidence of their programs' positive effects on student attitudes, skills and knowledge appear to be classifying career education as an innovation in instructional programming. Those who point to changes in teachers' and administrators' attitudes toward career education and who call attention to the level of activity generated by their efforts seem to be placing it in the category of an educational reform movement. This dual image considerably complicates any study of the efficacy of career education by creating two competing definitions of what constitutes its success.

While the major portion of this report concerns career education's efficacy as an innovation in instructional programming, it would not be complete or thorough without taking into consideration the success of career education as a reform movement. This chapter will therefore examine not only the other ways career education's effectiveness as an instructional effort has been measured, but it will also include an analysis of the ways in which career education's success as an educational reform movement has been evaluated.

Indicators of Success in Affecting Students

Any nationwide product evaluation of career education programs is hampered by the variety of ways in which the expected products of these programs are described and defined. Some single framework is necessary to structure the collection and analysis of data pertaining to the effects of career exploration, self awareness and occupational preparation activities on students' knowledge, attitudes and skills.

An appropriate starting point for constructing such a framework is the USOE Office of Career Education's policy paper, An Introduction to Career Education (1974). Listed in the paper are nine learner outcomes expected to result from an effective career education effort: (1) Academic achievement, (2) good work habits, (3) meaningful work values and a desire to work, (4) career decision-making and employment-seeking skills, (5) entry level occupational skills, (6) career choice, (7) awareness of continuing education opportunities, (8) successful job placement and (9) incorporation of work values into personal values.

Also in 1974, the Office of Career Education published the Handbook for the Evaluation of Career Education Programs which was prepared by Development Associates, Inc., of Washington, D.C. The Handbook offers an objectives-based definition of career education which not only includes most of the goal areas mentioned in the policy paper, but also expands upon these outcome areas by specifying the kinds of knowledge, skills and attitudes students would demonstrate in achieving each goal. The Handbook's 33 objectives were reportedly the result of the examination of federal legislation and policy, descriptions of federal, state and local efforts to implement career education in all 50 states and a variety of publications dealing with career education. State and

local practitioners met to discuss and reach consensus on the objectives. Considering this broad developmental base, the objectives' apparently close relationship to the goals listed in the policy paper and the straightforward, specific style in which the objectives are stated, it was decided that the Handbook's objectives would best serve as the framework for analyzing data for this study.

Four of the nine goal areas listed in the Handbook concern outcomes which have been investigated in the earlier sections of this report. The five goal areas and accompanying objectives which will be the subject of this part of the study are as follows:

I. Students will demonstrate increased self awareness:

- A. Students will be able to describe their own current abilities and limitations.
- B. Students will be able to describe their own current interests and values.
- C. Students will display positive attitudes toward themselves.
- D. Students will recognize that social, economic, educational, and cultural forces influence their development.

VI. Students will demonstrate good work habits:

- A. Students will be able to plan work effectively.
- B. Students will be able to adapt to varied work conditions.
- C. Students will have a positive attitude towards the concept of quality in relation to a work task.
- D. Students will have a positive attitude towards conservation of environmental and human resources in accomplishing work tasks.
- E. Students will have a positive attitude towards responsibility

for their own behavior and accomplishment of self-imposed work tasks.

F. Students will demonstrate a desire for continuous learning, both in school and out.

VII. Students will demonstrate work-seeking and work-getting skills:

A. Students will be able to identify, locate, and utilize sources that contain information about existing paid and unpaid work possibilities.

B. Students will be able to demonstrate skills required in applying for and accepting work.

VIII. Students who are leaving the formal education system will be successful in being placed in a paid occupation, in further education, or in unpaid work that is consistent with their current career education.

IX. Students will be aware of means available for continued education once they have left the formal education system:

A. Students will be able to identify souces of additional education in major types of paid and unpaid work.

B. Students will be able to identify means to support additional education for themselves in major types of paid and unpaid work. (Development Associates, Inc., pp. 6-8.)

Most of the student outcomes being measured by current career education projects are classifiable under one of the 15 objectives listed above or are classifiable under the objectives covered by the previous sections of this report. Those student outcomes which seem to have no relationship to these objectives will be treated separately.

Indicators of Success in Influencing Educational Systems

The Office of Career Education policy paper introduces career education as a reform movement designed to correct a number of social and educational problems ranging from student apathy to worker alienation. The paper begins,

> Career education represents a response to a call for educational reform. This call has arisen from a variety of sources, each of which has voiced dissatisfaction with American education as it currently exists. Such sources include students, parents and the business-industry-labor community, out-of-school youth and adults, minorities, the disadvantaged, and the general public. While their specific concerns vary, all seem to agree that American education is in need of major reform at all levels. Career education is properly viewed as one of several possible responses that could be given to this call (USOE, Office of Career Education, 1974, p. 13).

Included in the paper is a list of "career education tasks" that must be done in order for a comprehensive career education program to be considered operational. These tasks are the activities which teachers, business-industry-labor representatives, guidance and counseling personnel, parents, school administrators and school boards are urged to carry out in order to make a credible response to the demands for educational reform. The implication of this list of operational tasks is that, were they to be implemented in their entirety, the reforms sought by career education advocates would begin to take place. Involving parents, educators and community representatives as outlined in the "career education tasks" is an indication that the success of the career education as an educational movement reform is imminent.

The changes in educational policy and practice advocated by the career educator, according to the policy paper, are difficult and can come about only after long study and debate. Any of the 14 changes listed, if they were to actually come about, could be considered indicators of the success of career education as educational reform. The changes sought are these:

1. Substantial increases in the quantity, quality and variety of vocational education offerings at the secondary school level and of occupational education offerings at the post-secondary level.

2. Increases in the number and variety of educational course options available to students with a de-emphasis on the presence of clearly differentiated college preparatory, general education, and vocational education curricula at the secondary school level.

3. The installation of performance evaluation, as an alternative to the strict time requirements imposed by the traditional Carnegie unit as a means of assessing and certifying educational accomplishment.

4. The installation of systems for granting educational credit for learning that takes place outside the walls of the school.

5. Increasing use of non-certificated personnel from the business-industry-labor community as educational resource persons in the educational system's total instructional program.

6. The creation of an open entry-open exit educational system that allows students to combine schooling with work in ways that fit their needs and educational motivations.

7. Substantial increases in programs of adult and recurrent education as a responsibility of the public school educational system.

8. Creation of the year-round public school system that provides multiple points during any twelve-month period in which students will leave the educational system.

9. Major overhaul of teacher education programs and graduate programs in education aimed at incorporating the career education concepts, skills and methodologies.

10. Substantial increases in the career guidance, counseling, placement and follow-up functions as parts of American education.

11. Substantial increases in program and schedule flexibility that allow classroom teachers, at all levels, greater autonomy and freedom to choose educational strategies and devise methods and materials they determine to be effective in increasing pupil achievement.

12. Increased utilization of educational technology for gathering, processing and disseminating knowledge required in the teaching-learning process.

13. Increases in participation in educational policy making on the part of students, teachers, parents, and members of the business-industry-labor community.

14. Increases in participation, on the part of formal education, in comprehensive community education and human service efforts. (USOE, Office of Career Education, 1974, pp. 25-26.)

Most of the process measures employed by current career education projects are classifiable under one of the 27 "career education tasks" listed in the policy paper or are directly classifiable as contributing to one of the 14 changes in educational practice listed above. Those which seem to have no apparent relationship will be treated separately.

Taking product and process evaluation measures together, 56 indicators of the success of career education efforts have been identified. These represent, then, the ways people could try to assess the effectiveness of career education other than the assessment of improvements in students' academic achievement, career awareness and decision-making skills. The "career education tasks" being conducted by career education projects must be considered means to two interrelated sets of ends: Positive outcomes for students and desired changes in public educational policy and practice. Figure 1 illustrates these interrelationships.

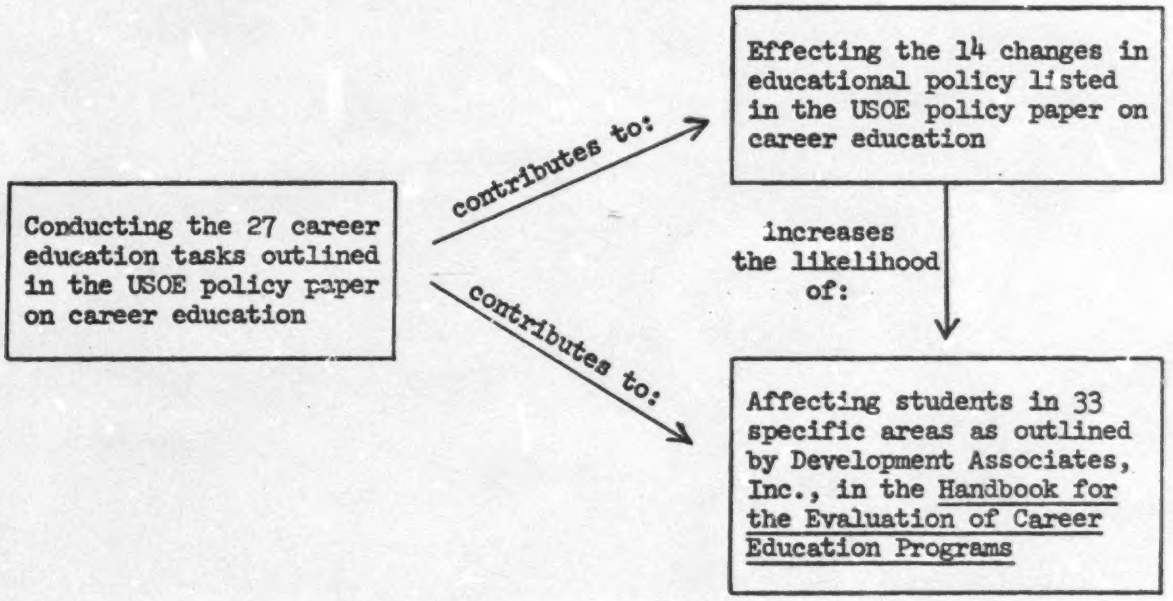
Effecting the 14 changes in educational policy listed in the USOE policy paper on career education
contributes to:
Conducting the 27 career education tasks outlined in the USOE policy paper on career education
increases the likelihood of:
contributes to:
Affecting students in 33 specific areas as outlined by Development Associates, Inc., in the Handbook for the Evaluation of Career Education Programs

Figure 1. Relationship of Career Education Processes to the Expected Outcomes of Career Education

Sources of Information for This Study

The time available for the completion of this study was too short to permit an exhaustive survey of the evaluation methods and measured results of the many career education projects which have been conducted in the past four years. Instead, information was sought from four distinct sources with the intention of sampling a range of professional perspectives on the issue of the efficacy of career education.

The major source of factual information about the results of current programs was career education practitioners themselves. Seventy-six (76) project directors were selected and asked to complete a mailed questionnaire. Each project met at least two of the following four criteria:

1. The project was named by a state coordinator of career education as one which, to his/her knowledge, had made a systematic effort to evaluate its impact.
2. The project is located in a state named by Smoker (1974) as having made exceptional progress toward the full implementation of the career education concept.
3. The project is sponsored by a school district revealed by Smoker's study to have made substantial systemwide efforts to implement career education.
4. The project is identified by Smoker as having received recognition in current literature for developing a comprehensive approach to career education.

Another important source of information used in conducting this study was the current literature on career education, particularly that sponsored or published by the U.S. Office of Career Education and the Education and Work

Task Force of the National Institute of Education. These sources were instrumental in the formulation of hypotheses regarding the issue of the efficacy of career education and the subsequent construction of inquiries and questionnaires mailed to career educators and other potential sources of information.

To balance the perspectives of the career education practitioners who responded to the survey and the publications of the Office of Career Education and the National Institute of Education, recent NIE contractors and the research directors from 65 large school districts were also asked for input. The contractors were selected from abstracts of projects funded by NIE in FY73 and FY74 and listed in their publication, Career Education Program: Program Plan for Fiscal Year 1975. Those projects were selected which dealt most directly with the evaluation of career education programs and whose major emphases included career exploration or occupational preparation. Directors of research in school districts having enrollments of 50,000 or more were identified from a directory prepared by the Houston (Texas) Independent School District in February, 1974.

Copies of the questionnaires and inquiries sent to career educators, NIE contractors and research directors are appended to this report. The questions these letters and questionnaires were designed to answer fall into two general categories: (1) Questions pertaining to the known results and effects of career education programs and (2) questions pertaining to the methodology applied in identifying program results and effects. The last category was considered important in establishing the credibility of reported program results and in identifying promising alternatives to the evaluation of developmental educational programs initiated at the national policy-making level.

Profile of the Career Education Projects Studied

The career education projects which supplied information for this part of the study probably represent the best efforts of the nation's career educators. By being located in states which were recognized in a national survey (Smoker, 1974) as having made significant commitments to the implementation of career education, these projects have had the support and assistance of state education officials for several years. By having been named by their states' career education coordinators as having demonstrated the impact of their efforts, they are more likely than lesser known projects to have developed convincing methods of evaluating and disseminating program results.

Of the 76 projects surveyed, 32 (42%) responded by supplying a completed survey and/or an evaluation report. Of the 65 inquiries made to large-district research directors, 17 (26%) returned completed survey forms. Seven of these supplied project evaluation materials. Two of NIE's Experience Based Career Education projects also supplied written project information. All together, 41 projects were examined for this report. Of these 41 projects, 26 described their evaluation results on the survey form or supplied written reports from project evaluators. The findings reported in the following sections are based on information supplied by these 26 projects. All 41 responding projects are listed in the appendix.

The typical project in the study sample is partially or entirely funded by federal Vocational Education Act funds, has been in operation at least three years and serves a K-12 student population. Eleven projects are funded at either the local or state levels and receive no federal support.

All of the projects reported having at least one program component relevant to this part of the study. Thirty-five (35) reported having career exploration components, and 34 reported having self-awareness components. Only about half of these (18) reported job placement components. Occupational preparation in the form of classroom instruction is provided by 29 projects, and work experience programs are conducted by 25 projects.

The survey form asked which of 13 goal areas are being addressed by each of the projects surveyed. Of the 34 responding to this item, the numbers reporting having goals in each of the relevant goal areas are listed below.

Knowledge of good work habits	26
Competence in career decision making, job-hunting skills, job-getting skills	20
Entry level occupational skills	14
Knowledge of continuing education opportunities	19
Successful placement in paid occupation, further education or vocation	11
Positive student attitude toward the program	23
Positive teacher or administrator attitude toward the program	23
Community knowledge and support of the program	20
Student knowledge of their interests and abilities	29

From 1 to 10 percent of the projects' budgets are allocated for evaluation of their programs. Seventeen (17) projects reported having internal evaluators on their staffs, most of whom were assigned part time. Twenty-seven (27) projects have contracted with external evaluators in addition to or instead of having an evaluator on their staffs. Most external evaluators are private consultants rather than university specialists. The kinds of evaluation designs employed, the instrumentation used and the nature and reliability of these projects' evaluation findings are discussed in the remaining sections of this report.

Career Education's Impact on Students

Few of the projects in the study sample measured student outcome variables which were clearly related to the student outcome statements listed by Development Associates, Inc., in the Handbook for the Evaluation of Career Education Programs. Although the greatest variety of measured student outcomes were found to be associated with career exploration activities, it is difficult to separate the potential outcomes of career exploration from those of career orientation, career motivation or career awareness activities. There seem to be no mutually exclusive operational definitions of these components. It is apparent from project descriptions that career exploration is a later stage of career development, but these project descriptions are quite imprecise when it comes to naming program activities and student outcomes that relate only to the concept of career exploration.

In addition to career exploration outcomes, career educators have also examined student outcomes in the areas of self-awareness and job placement. Little or no attention seems to be being paid to the evaluation of occupational preparation programs.

Impact on Students' Self-Awareness

Table 1 on the following pages describes seven projects' efforts to measure their programs' effects on student self-awareness. The Self Observation Scale published by the National Testing Service of Durham, North Carolina, and the Career Maturity Inventory published by CTB/McGraw-Hill are nationally normed instruments, while the remaining instruments listed in the table were locally developed. Unless the numbers of students and teachers surveyed by the New York project are exceptionally large, the differences in percentage of respondents giving desired answers to the survey items are not

Table 1. Career Education's Impact on Student Self-Awareness

OUTCOME	PROJ. LOCAT.*	GRADE LEVEL	DESIGN AND INSTRUMENTATION	RESULTS	ASSOCIATED ACTIVITIES
Positive self-concept	New York (2)	3, 6	"Understanding Myself" Survey administered to participants and a control group as a pretest and a posttest	4% more participants than control group students selected desired responses	(None given)
	(Same)	(Same)	Classroom Teacher Observation Form completed pre- and post by participants' and control group's teachers	5.3% more of the participants' teachers selected the desired responses	
	(Same)	(Same)	"Assessing My Child in School" Survey completed pre- and post by participants' and control group's parents	No significant differences	
	Missouri	K-8	Student Attitude Survey administered pre- and post	Significant positive change on Attitude Toward Self Scale at primary level; significant reduction in negative attitudes at grades 4-8	6 career education curriculum units and five 2-day workshops for teacher facilitators
	Oregon (2)	3, 6	Self Observation Scale (Grade 3) and Self Appraisal Inventory (Grade 6) administered at end of second year of project	Grade 3 below norm in Self-Acceptance, School Affiliation, Achievement Motivation; above norm in Social Maturity and School Affiliation. No base for comparison for Grade 6	Presence of Career Awareness Resource Teacher

*See list of respondents in appendix for names of projects and cities in which they are located.

Table 1. Career Education's Impact on Student Self-Awareness (Cont.)

OUTCOME	PROJ. LOCAT.*	GRADE LEVEL	DESIGN AND INSTRUMENTATION	RESULTS	ASSOCIATED ACTIVITIES
Ability to express opinions openly in class	Ohio (5)	K-6	No formal assessment; observation only	Students appeared better able to form and express their opinions	Cross-age models, role-playing
General Self-Awareness	New Jersey (5)	Not Spec.	Career Maturity Inventory, Part 1, given to participants and a control group	Results positive in favor of participants but not at the 5% level	(None given)
	North Carolina	3, 6	Self Observation Scale given at project schools and control schools	Grade 3 participants' SOS scores significantly higher than control group; no difference between 6th grade groups	Resource persons visiting the classrooms
	Arizona (2)	4-12	Four questions on the "Careers Test" answered by high-exposure and low-exposure students	Students in the high exposure group have higher performance expectations, see themselves as brighter and are more certain of attaining their educational and occupational aspirations	(None specified)

*See list of respondents in appendix for names of projects and cities in which they are located.

likely to be statistically significant. The North Carolina project used regression analyses to identify the use of resource persons in the classroom as being associated with the improvement in the third graders' self-concepts. All other associated activities were subjectively identified as being significant contributors to project success in improving student self-concept.

Measured Career Exploration Outcomes

The kinds of outcomes career educators have made some deliberate attempts to measure in the area of career exploration are described in Table 2. Included in this summary are evaluation results for program components such as career motivation and career orientation as well as for components specifically referred to as career exploration. Generally speaking, the programs being conducted in these areas involve the in-class exposure of students to the 15 USOE career clusters. Little or no information was supplied about the kinds of classroom activities used as vehicles for exposing students to careers, and no project evaluation attempted to identify any relationships between particular student outcomes and the kinds of exploration activities in which they participated. Consequently, no data were available for estimating the relative effectiveness of different kinds of career exploration activities.

For the outcomes and projects listed, it appears that positive student outcomes are more likely to result at the middle or junior high school level than at the elementary level. Elementary students' attitudes toward work and careers, their ability to relate occupational options to their own interests and abilities and their ability to make realistic occupational choices seem unaffected by participation in a career education program.

At the junior high school and high school levels, reported results were positive in all but one case. The North Carolina project failed to demonstrate

Table 2. Career Exploration Outcomes

OUTCOME	PROJ. LOCAT.*	GRADE LEVEL	DESIGN AND INSTRUMENTATION	RESULTS	ASSOCIATED ACTIVITIES
Positive attitude toward work	Ohio (1)	5,7,9	Criles' Career Attitude Scale given to project students and a comparison group	No significant change in either group's scores in comparison with national norms	(Not specified)
Awareness of the personal and social significance of work	Ohio (7)	K-6	No instrument used; observation only	Increased student awareness evident at project schools' Career Education Day programs	(Not specified)
Positive attitudes toward careers and the career choice process	New Jersey (5)	Not Spec.	Junior Inventory of Motivation given to project students and a control group	Results positive in favor of project students but not at the 5% level	(Not specified)
	Ohio (7)	1-3, 4-6	Locally developed test given to project students and a control group	6.5% more project students than control group students knew the necessity and importance of a wide range of work; 14% more at intermediate level	(Not specified)
	Missouri	K-3	Student Attitude Survey given pre and post	No significant change in Attitudes Toward Work Scores	(Not specified)

*See list of respondents in appendix for names of projects and cities in which they are located.

Table 2. Career Exploration Outcomes
(Cont.)

OUTCOME	PROJ. LOCAT.*	GRADE LEVEL	DESIGN AND INSTRUMENTATION	RESULTS	ASSOCIATED ACTIVITIES
Awareness of the relationship of school to work	New York (2)	Not Spec.	"Understanding Myself" Survey for students, Classroom Teacher Observation Form for teachers and "Assessing My Child in School" Survey for parents given pre and post to project participants and a control group	6.5% more project students aware of school-work relationships; 10.8% more project parents reported increased student awareness of school-work relationships	(Not specified)
	Ohio (4)	8	Career Test, Relationship of A Life Related Learning Activity to the Working World, given to project students at end of year	40-57% of students performed above "the established norm" in the Test's three exercises	(Not specified)
	Calif. (4)	7-12	Survey completed by project students at beginning and end of project's three years	Little change in the high percentage (82.4%) of students who said that career education could help them understand certain other subjects or in the percentage (86%) who said school could help them prepare for work	(Not specified)
	Ohio (7)	4-6, 7-8	Student survey administered to project students and a comparison group at the end of the year	21% more intermediate and 8.1% more junior high students in project felt school was helping them prepare for work than in comparison group	(Not specified)

*See list of respondents in appendix for names of projects and cities in which they are located.

Table 2. Career Exploration Outcomes
(Cont.)

OUTCOME	PROJ. LOCAT.*	GRADE LEVEL	DESIGN AND INSTRUMENTATION	RESULTS	ASSOCIATED ACTIVITIES
Awareness of the relationship of school to work	North Carolina	7	Career Based Curriculum Goals Test given to project students and a control group	No significant difference in students' reasons and their perceptions of adult reasons for going to school	(Not specified)
Ability to make and justify tentative occupational choices	Ohio (7)	4-6, 7-8	Student survey administered to project students and a comparison group at the end of the year	No difference between project and comparison students in grades 4-6; a 34% difference in favor of project students in grades 7-8	(Not specified)
	North Carolina	7	"Career planning knowledge" section of Career Development Test given to project and control groups	Project students scored significantly higher	(Not specified)
	New Jersey (5)	Not Spec.	Career Maturity Inventory, Part 3, given to project and control groups	Results positive in favor of project students, some significant at 1% level	(Not specified)
	Arizona (1)	7-8	Survey of Occupational Cluster Interest given at end of year	85% completed instrument satisfactorily	(Not specified)
Interest in a wide variety of job clusters	Arizona (1)	6-8	Project designed interest surveys at end of year	Interest expressed in all 15 job clusters, ranging from 2% to 21% in each cluster, indicating students are making independent decisions	(Not specified)
	Arizona (2)	9-12	Careers Test given to high exposure and low exposure students	Significant difference (.001) in range of interest shown by the students in the high exposure group	(Not specified)

*See list of respondents in appendix for names of projects and cities in which they are located.

Table 2. Career Exploration Outcomes
(Cont.)

OUTCOME	PROJ. LOCAT.*	GRADE LEVEL	DESIGN AND INSTRUMENTATION	RESULTS	ASSOCIATED ACTIVITIES
Knowledge of good work habits	New Jersey (2)	Not spec.	Teacher made tests given to project students at end of year	85% of students gave desired responses	(Not specified)
	North Carolina	7	Career Based Curriculum Goals Test given to project and comparison groups at end of year	A significant difference in favor of the control group	(Not specified)
Knowledge of continuing education requirements and opportunities	New Jersey (2)	Not spec.	Project developed questionnaire developed by guidance department	90% gave desired response to the questionnaire	(Not specified)
	New Jersey (5)	Not spec.	Career Maturity Inventory, Part 4, given to project and comparison groups	Results positive in favor of project students, some significant at the 10% level	(Not specified)
	Arizona (2)	4-12	Careers Test given to high exposure and low exposure students	High exposure students' knowledge significantly higher at the .001 level	(Not specified)
Awareness of relationship between personal interests and abilities and work roles	North Carolina	3,6	Career Based Curriculum Goals Test, given to project students and a control group	No significant differences between the two groups	(Not specified)

*See list of respondents in appendix for names of projects and cities in which they are located.

Table 2. Career Exploration Outcomes
(Cont.)

OUTCOME	PROJ. LOCAT.*	GRADE LEVEL	DESIGN AND INSTRUMENTATION	RESULTS	ASSOCIATED ACTIVITIES
General reaction to career exploration activities	Colorado	7	Locally prepared questionnaire completed by participating students on a voluntary basis	60.7% liked the variety of classes offered in the exploration program, boys' and girls' interests markedly different	(Not specified)
	Ohio (7)	7-8	Student survey at end of year to project students and a comparison group	92% of project students feel a specific effort is being made to help them in career planning; 72% of comparison group expressed this feeling	(Not specified)
	Pennsylvania (1)	6,7,8	Student attitude survey at end of year	Mean ratings of the career orientation program were positive at all levels	(Not specified)

*See list of respondents in appendix for names of projects and cities in which they are located.

any impact on seventh graders' awareness of the relationship of school and work, and found that a seventh grade control group had better work habits as defined by the evaluation instrument they had developed. In most of the other cases, career exploration participation resulted in positive changes in knowledge or attitudes that were significantly greater than changes measured among control or comparison groups. In the case of some of the projects, no statistical comparisons were made, or measures were made only once instead of on a pre-post basis, so it is uncertain as to whether the reported results are replicable or even attributable to participation in the career exploration experience.

Effects of Occupation Preparation and Job Placement Programs

Although 18 of the surveyed projects reportedly have job placement components and 29 have occupational preparation components, only three projects attempted to describe effects on participating students. In-school occupation preparation programs are conspicuously absent from the program descriptions supplied by the surveyed projects, and work experience programs are mentioned only infrequently. No attention is given in the projects' lists of anticipated student outcomes to the high school graduate's need to possess a salable skill if s/he does not plan to enroll in a postsecondary educational program.

A student follow-up survey from a large Oregon school district showed that 95 percent of the 1967, 1969, 1973 and 1974 graduates felt that schools should help students develop employment skills and competence to enter the job market. Eighty-seven (87) percent felt placement services should be available to all high school students. In contrast, when asked how they obtained their first job after high school, less than six percent said they had received help

from a teacher or a counselor or had gotten a job through a work experience assignment.

Another, smaller, Oregon school district which had conducted a career education program for three years surveyed its high school graduates for 1972, 1973 and 1974. Students who had taken career cluster courses and cooperative work experience in high school were found to be more likely to be working in their chosen career area than vocational, academic or general studies students. More vocational and cluster students said their high school experience had helped prepare them for their chosen career area. It was also found that more 1974 graduates than 1972 graduates made tentative career choices before leaving high school.

In Pennsylvania, a project called a vocational education counseling system which had job placement as one of three project components reported having placed in jobs 100 of 1,878 students interviewed. The evaluation report does not state whether this number of placements was satisfactory or not. An attitude survey of 75 former Cooperative Work Experience students failed to yield enough replies to estimate the effectiveness of the counseling and placement services offered them.

A Wisconsin project which established numerous contacts with local employees and the state employment agency and which offered a variety of employment counseling services reported that "the number of students who took advantage of these opportunities could have been greater." Though students had received increased placement services since the last year, two problems were cited as barriers to greater success: (1) High school placement personnel needed to become more knowledgeable about careers and (2) the role of the counselor needed to be changed.

High school students in an Arizona career education project were asked, "If you had to leave school at the end of this year, how well prepared are you to find a job?" Sixty-five (65) percent of the students said they were prepared while 52 percent of the students not involved with the project said they felt prepared. These same students completed an instrument which measured their preparedness for employment in several occupational clusters, their ability to complete job applications and their ability to differentiate between an entry level job and future mobility within a job cluster. Although project participants did significantly better on this instrument than students not involved in the project, fewer than a third of the students demonstrated these employability skills.

Student Attitudes Toward Career Education

Nearly half of the projects for which evaluation results were supplied demonstrated interest in students' general reactions to participation in a career education program, either in terms of their attitudes toward career education or their attitudes toward school. Table 3 summarizes the results of these projects' efforts.

Generally speaking, students respond positively to participation in career education activities regardless of grade level or type of program. There is some indication that student attitudes toward school become more positive after participating in career education activities. Although these results are encouraging, many projects rely almost exclusively on subjective attitude measures as indicators of project success and of those who do, many do not utilize pre-post measures and/or comparison or control groups in arriving at their conclusions. The third party evaluator for a large California project

Table 3. Career Education's Effects on Student Attitudes

OUTCOME SOUGHT	PROJ. LOCAT.*	GRADE LEVEL	DESIGN AND INSTRUMENTATION	RESULTS
Positive attitudes toward the program and its services	Ohio (1)	7-10	Locally developed survey administered to project students and a comparison group	Positive; Career Orientation students (7-8) and Career Exploration students (9-10) rated the project significantly higher than students in the comparison groups
Positive attitudes toward classes and guidance services having a focus on careers	Wisconsin (1)	K-12	Informal observation; no documentation or quantitative data	Positive; Student attitude was dependent upon amount of exposure to career education activities, which in turn, was dependent upon classroom teacher acceptance and support of career education
Belief that career education is a growing influence	Calif. (4)	7-12	17-item student survey administered in 1973 and in 1975	No effect to negative; 65.2% of high school students responded favorably in 1974-75 compared with 62.4% in 1972-73; 45.1% of junior high school students responded favorably in 1974-75 compared with 73.2% in 1972-73
Positive attitude toward the program and toward school in general	North Carolina	3,6,7	Locally developed questionnaire at end of project year	Positive; third, sixth grade favorable toward program and school in general; more than 3/4 of 7th grade said they "enjoy school more than last year" and that "learning about careers makes school more interesting"
Positive attitudes toward a career exploration class	Colorado	7-8	Voluntary student response (59%) to a single questionnaire	Positive; 60% liked the variety of classes offered; 17.5% said they sometimes came to school when they didn't feel well just to be in their classes
Positive attitudes toward education, school curriculum, school resources, counseling, overall experience-based career education program	Pennsylvania (1)	10, 11 (first year) and 12 (second Year)	Assessment of Student Attitudes Survey given pre and post to 12th grade and control group; Student Opinion Survey given to all project students and control groups at midyear	Positive; 12th graders in program for 2 years showed significantly better attitudes toward school than students in a traditional high school; all participants highly favored the program in comparison to their regular high school program

*See list of respondents in appendix for names of projects and cities in which they are located.

Table 3. Career Education's Effects on Student Attitudes
(Cont.)

OUTCOME SOUGHT	PROJ. LOCAT.*	GRADE LEVEL	DESIGN AND INSTRUMENTATION	RESULTS
Positive attitudes toward experience-based career education program	West Virginia	12	Three student questionnaires, two given at midyear and another at end of year	Positive; students consistently rated the EBCE program higher than their home high schools on opportunities to learn about occupations, motivation to learn and opportunities for general learning
Positive attitudes toward school and the school situation	New Jersey (5)	Not spec.	Junior Inventory of Motivation given to project students and a comparison group	Positive; in the direction of the project group but not significant at the 5% level
Increase in student interest in school	New York (2)	Not spec.	Use of attendance records	2.9% attendance increase from 1973-74 to 1974-75
Positive attitudes toward teachers, subjects, peers, school structure	Oregon (2)	1-6	School Sentiment Index given to students in 1974 and 1975 who had been in the program 1, 2, 3 or 4 years	Neutral; Between 1974 and 1975 a shift toward a less positive attitude although not significant; about 75% of students show positive attitude regardless of length of time in the program

*See list of respondents in appendix for names of projects and cities in which they are located.

cautioned against reliance on one-time self-report measures of attitudes:

> These data provide primarily perceptions and attitudes of project students based on self-report instruments. Although these data are useful, conclusive evidence of the impact of the project on student knowledge and attitudes would require comparison with a similar group of students not exposed to project activities. Furthermore, determination of actual changes in behavior and knowledge gained would require use of more objective assessment devices. These could take the form of observation of student behavior and instruments sampling knowledge of the areas specified in the project objectives.

Career Education's Emphasis on Process

In examining each of the project evaluation reports submitted for this part of the study, it was generally difficult to locate and compile student outcome data because most project officials appear to equate evaluation with the documentation of project activities and processes rather than with the documentation of the results or products of those activities. Many career education evaluation reports are a proliferation of meticulously outlined process objectives and carefully tallied evidence of the staff's progress toward completing these planned activities. Many State departments and local school districts all across the country reveal their serious commitment to the implementation of career education by producing elaborate long-range plans for the incremental integration of career education functions and processes into the educational mainstream. Anticipated effects of career education activities on the participating students' attitudes, skills and knowledge are rarely outlined in the same amount of detail and occasionally appear to have been added to a plan as "window dressing" or as an afterthought.

The processes and activities which receive the most attention from career educators fall into two categories, the first of which often appears to be a

career education projects' only purpose:

1. Activities designed to change the traditional roles and behaviors of teachers and counselors.
2. Activities designed to increase the support for and involvement with education among members of the community, particularly parents and potential employers.

The first category may be further subdivided into activities related to the development and dissemination of career education materials and activities related to inservice training and consultation services for teachers and counselors.

In the case of the development and dissemination of career education materials, most projects reported the number of items produced and the number of teachers known to be using them in their classrooms. Almost all recorded attempts to evaluate the materials for production quality and instructional effectiveness involve asking teachers for general opinions in end-of-year surveys rather than applying any systematic criteria to the evaluation of specific items.

Inservice programs and consultation services for teachers and counselors are evaluated in terms of the numbers of people who enroll or the numbers who request project assistance, these data presumably being indicators of interest in career education and willingness to participate in its implementation. Some of the projects in the survey sample conduct periodic surveys to determine teachers' and counselors' attitudes toward career education concepts and their degree of support for the project. Students occasionally are asked to report the frequency with which their teachers introduce career education topics in their classes or the kinds and amounts of assistance they have requested from school counselors.

Parent and employer involvement activities are evaluated in much the same ways as educational staff development activities are evaluated. Numbers of parents who attend careers-related events at school are reported as evidence of their interest and involvement in their children's career development. Employers at work experience sites are asked to rate students' general attitude and performance at the work sites and are asked for their reactions to career education concepts and programs.

To convey the range of success the surveyed career education projects are experiencing with the implementation of career education processes in the above categories, the following excerpts from their evaluation reports are presented:

> The overall objective was to produce 250 [curriculum] units. A review of documents presented by the project staff indicates that 276 units were produced during the three-year project.... Thus, for all intents and purposes this overall objective was met so far as the quantity of curriculum units produced is concerned. (California - 4)

> When asked how much they had used career education teaching units, developed by subject matter teachers for their discipline, only three of ten responding staff members (29.2%) replied that they had used the units to a somewhat or great extent; one-half (50.0%) replied little or not at all. (Colorado)

> Twenty-five percent more teachers of grades K-6 and 61 percent of grades 7-8 provided four or more activities in 1974-1975 than in previous year. 1973-1974--62 percent of teachers provided four or more activities. 1974-1975--82% of teachers provided four or more activities... 80.5 hours of formal pre- and in-service in 66 sessions were provided with 1,804 persons logged in attendance with extent of participation of each group noted. (Arizona - 1)

> Using the California Department of Education and Ceres Unified School District goals as a model, 25% of Ceres Unified School District Elementary Staff will know the goals and objectives developed by the 1973-74 Career Education Matrix.... Objective met: 29% of elementary staff know the goals and objectives. See Appendix I for summary of evaluation data. (California - 1)

Do teachers have a positive attitude towards career education as a result of exposure to in-service training activities? Only twenty (20) percent of the 650 teachers responded to the attitude survey. Of those that did, all had a positive attitude towards career education and seemed to be quite knowledgeable about it. However, there were no differences in the attitude of teachers who attended the workshop and those who did not attend it. (Minnesota)

Involved teachers completed a staff reaction (evaluation) sheet. A total of eighteen (18) teachers completed the evaluation.... The majority of reports contained positive reactions and offered constructive suggestions. (Ohio - 4)

Local guidance staff increased their direct involvement in the career education program during Phase II. One counselor from each secondary school participated in each of the summer career education curriculum writing workshops in 1973 and 1974. During this time role descriptions were developed, and group guidance activities were developed.... The activities just described are but a few of the efforts to redirect guidance staff and services in the public schools. There can be little doubt that this grant has had an impact on improving guidance services to students and increased the involvement of guidance personnel in the career education program. (Wisconsin - 1)

Parents and personnel from business and industry were used as resource speakers and in an advisory capacity. Direct contact was made with parents for the purpose of explaining Career Education and its goals. The Post High School Opportunity Night program brought many parents into the school as well as numerous representatives of the business and industrial community. (Ohio - 5)

Ninety-two percent of the parents responded that the role of a parent in the career choice of a student is to encourage self-responsibility. ...Yet, when these same parents were asked how far in school they expected their children to go, ...only nineteen percent of the parents stated their children could decide for themselves. ...These findings indicate that much more work needs to be done with parents in order to expand their conceptualization of the economic marketplace. (Arizona - 2)

Business and industrial community response to a questionnaire showed that two-thirds of those returning the survey instrument were familiar with the Career Based Curriculum in the Union County Schools and two-thirds of those responding feel the "activities will be of substantial value to the community."

> Although the business and industrial community respondents indicated they don't believe career education is just another fad that will soon be forgotten, there was not consensus about career education as a secondary program only or as an integral part of the K-12 program. (North Carolina)

Career education projects' concentration on process rather than product evaluation is reasonable in light of the national goals for educational reform published in the Office of Career Education's official policy paper. Projects funded from the national level understandably could be expected to reflect the fervor for reform conveyed by An Introduction to Career Education. The desired reforms (listed at the beginning of this paper), however, represent substantial departures from educational practice and so must be striven for in an incremental fashion. By providing evidence of the degree to which their projects have been able to induce teachers, counselors, administrators, parents and members of the employment community to perform "career education tasks" like those listed in the policy paper, career educators are documenting their incremental efforts toward reform and are demonstrating how their projects are contributing to the success of career education as an educational reform movement. The relative amount of attention they devote to specifying and measuring the student outcomes of their projects is directly proportional to the priority implicitly assigned the learner outcomes listed in the policy paper.

Reliance on process evaluation methodology in assessing the success of career education programs may be the result of necessity rather than choice, however. The kinds of student outcomes sought from career education programs cannot easily be reduced to precise, observable behaviors which all career educators would readily agree represent the full range of behaviors implied in the general goal statements. Career education is a response to a general dissatisfaction with the "typical" American's ability to assume the responsibilities of being a productive member of adult society. Deducing the specific

skills and knowledge needed to correct this situation is destined to be a difficult (and perhaps impossible) undertaking. Until such performance criteria are developed, however, product evaluation results will probably not be very convincing evidence of the efficacy of career education unless accompanied by substantial process evaluation information.

Another barrier to credible product evaluation is the status of career education measurement technology. Relatively few standardized evaluation instruments have been developed so far. Their applications to career education programs are limited, and their validity is in some cases yet to be established. In the absence of valid, reliable measures of career education outcomes, project developers have had to develop their own instruments. Restraints of time, money and skill appear to have prevented the development of local evaluation instruments that measure student ourcome as directly and as accurately as possible. Unless a project's staff includes an experienced evaluation specialist, it is unlikely that locally developed instruments will yield valid and reliable information about the project's impact on participating students.

Summary and Conclusions

The major purpose of this part of the report was to determine the efficacy of career education programs in areas other than academic achievement, career awareness and career decision making. Forty-one (41) career education projects responded to a survey designed to identify the effects on students of these other career education components, particularly career exploration, occupational preparation and job placement. About three-fourths of the responding projects were supported by Vocational Education Act funds (Parts C and D) while the remainder were funded at the state and/or local levels.

The student outcomes measured by the responding projects were loosely categorized into these areas: (1) Self-awareness, (2) career exploration, (3) occupational preparation and job placement and (4) general attitudes toward career education. From the data reported by the surveyed projects the following tentative conclusions can be drawn about the efficacy of career education in these four areas:

1. Participation in career education activities appears to have a positive influence on students' self-concept and general self-awareness, particularly in the primary grades. The amount of influence reported is extremely variable, however, ranging from no significant differences between participating students and control groups in a few projects to statistically significant increases in self-concept in other projects. Virtually no projects are able to relate outcomes in this area to specific program activities, so there is no way of establishing the relative effectiveness of different kinds of career education activities designed to increase student self-awareness.
2. Elementary and junior high school students involved in what projects term career motivation, career orientation and/or career exploration activities seem to respond differently. Elementary students seem less likely to acquire positive attitudes toward work and seem less capable of relating their interests and abilities to occupational options in making realistic tentative career choices. Most students like the activities in which they participate and develop more divergent career interests as the result of their participation.
3. Virtually no effort is being made to measure the effectiveness of occupational preparation and job placement programs. None of the projects surveyed had written objectives describing the intended out-

comes of such activities in terms of the occupational skills students should possess upon leaving school or the proportion of successful job placements expected.

4. Students in grades K-12 generally respond positively to participation in career education programs. Their attitudes toward career education and toward school in general appear to improve with increased exposure to career education programs and services.

The conslusions stated here are very tentative and should not be used in determining career education policies unless they are heavily supplemented by other kinds of information. Some of the reasons for urging such caution are listed below.

1. True experimental evaluation designs are seldom used in measuring program impact on students. When comparison groups are used, no apparent attempts to prevent contamination are made.
2. The objectives of the different career education components are ambiguous and often imprecise. What one "career exploration evaluation instrument" measures, for example, may be entirely different from what another instrument of the same title measures. Consistent results from a number of "career exploration evaluation instruments" could be very misleading.
3. The specific treatments comprising career orientation, career motivation, career exploration or any other program component are extremely variable and virtually no projects attempt to systematically identify what particular activity (or series of activities) is associated with what particular student outcome. Without this kind of information, evaluation findings have little value to someone who wants to design and implement a potentially successful career education program.

These findings are congruent with the findings and general conclusions of another, more rigorous study of the results of the first three years' efforts to implement programs under Part D of the Vocational Educational Act. Under contract with the USOE Division of Vocational and Technical Education, Development Associates of Washington, D.C., concluded in their March, 1975, report:

> Projects were typically not well defined in terms of purpose or clientele and this lack of clarity may relate to the failure in many projects to identify student outcomes significantly related to project activities (p. 3).
>
> A review of the stated objectives of the 50 projects reveal that in many cases the activities called for by the policy paper were not addressed. In addition, a comparison between stated objectives of projects and activity categories indicated that in many projects the performance of activities could not be related to the stated objectives (p. 4).
>
> The definition of key terms and concepts was neither precise nor consistent at either the federal or local levels. ...This failure to establish operational definitions and categories contributed to the inability of projects to identify with assurance participants in the programs and to the inability at the federal level to monitor project efforts effectively. (Development Associates, Inc., 1975, p. 6.)

In the course of examining the career education projects in the study sample for evidence of success in achieving desired student outcomes, it becomes apparent that an entirely different approach to evaluating project success is being used. This alternative to standard product evaluation is a kind of process evaluation designed to demonstrate career education's effectiveness as an educational reform movement. The relatively heavy emphasis on the processes and activities of career education in the USOE policy paper, An Introduction to Career Education, is proposed as one of the possible reasons for a penchant for counting the career education materials developed, disseminated and used, for counting the number of teachers and counselors who participate in inservice activities and for surveying parents and potential employers for their attitudes about career education concepts.

Other possible reasons for the heavier emphasis on process measures are the lack of clarity and consistency in career education goals and objectives and the lack of valid and reliable instruments for measuring program impact. Whatever the reason for career educators' concern for processes and their apparent lack of systematic attention to student outcomes, the evidence of success career education projects are able to produce is more clearly related to the presumed need for educational reform than it is to career education's success as an instructional innovation.

In summary, the career educator is finding it both desirable and expedient to focus evaluation efforts on gauging levels of support and acceptance for career education programs rather than on measuring such programs' short- and long-term influences on students' ability to link education and work in shaping their careers. Dr. Kenneth B. Hoyt, Director of the U.S. Office of Career Education, very accurately described the status of current career education evaluation efforts in his address to the March, 1975, USOE Career Education and Teacher Education Conference:

> It seems safe to say that the quantity of effort expended at the local school district level has exceeded the quality of that level by a very wide margin. Evaluation efforts, while generally yielding positive results, are found only infrequently and, by and large, are lacking in convincing quality. This lack of sound evidence of effectiveness has not seemed to dampen local enthusiasm for career education. It seems appropriate to say that, by and large, career education has been accepted on faith--and that an abundant amount of faith exists (p. 4).

Recommendations

Policy makers at the national level are in the best position to take advantage of the developmental work of the nation's career educators over the past four years. Practitioners of career education, given adequate direction and appropriate incentives, can draw upon their past experiences and make

significant contributions to a national effort to define career education more clearly and identify the most effective strategies for achieving its goals. The enthusiasm reportedly being generated by current career education projects across the country in the absense of consensus as to what constitutes career education in practice and in the absence of convincing evidence of these projects' overall effectiveness should alert policy makers at all levels to the dangers of "oversell." Dr. Rupert Evans, in preparing the epilogue to the Office of Career Education's publication, Career Education: The State of the Scene, recognized this danger:

> The sudden popularity of career education may prove to be its own worst enemy, for almost everyone will try to use it for their own ends. Thus the key question may well be: what is not career education, and how can it be prevented from masquerading as the genuine article; thus diverting attention and resources from the goals and activities to which real career education is addressed? (p. 272)

Local, state and federal level career educators could work together to more clearly describe "the genuine article" and to more precisely define "the goals and objectives to which real career education is addressed" by taking the following steps:

1. Reach consensus on national career education goals in terms of student outcomes expected at each stage of career development.
2. Analyze these goals carefully and reduce them to performance criteria that can be used to guide the planning and evaluation of career education programs.
3. Educate program planners, local, state, and federal policy-making bodies, and those who administer career education projects about the means-end relationship between career education processes and career education products to prevent the development, approval and implementation of projects whose expressed purposes are to conduct activities

rather than to effect desired student outcomes.

4. Develop and standardize evaluation instruments that will reliably measure a program's effectiveness in helping students acquire the attitudes, skills and knowledge represented by the performance criteria resulting from the analysis of national career education goals.
5. Support career education projects which include carefully thought out plans for the systematic validation of program processes and the rigorous evaluation of program outcomes.

If career education is to become an integral part of education practice, practitioners and policy makers must be prepared to apply more than enthusiasm to the effort. Enthusiasm, conviction and the drive for reform are perhaps sufficient to create widespread commitment to career education, but if career education is to become a long term productive force in education, it is going to require much more. All career educators must be prepared to devote to the task a great deal of "conscious effort, other than that involved in activities whose primary purpose is either coping or relaxation, aimed at producing benefits for oneself and/or for oneself and others." In a word, career educators must be prepared to work.

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A P P E N D I X

Letter to State Career Education Coordinators
Letter and Survey Sent to Career Education Projects
Letter and Survey Sent to Large-District Research Directors
Career Education Projects Who Responded to the Survey

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF EDUCATION
WASHINGTON, D.C. 20202

July 29, 1975

TO: Each State's Coordinator of Career Education

FROM: Mr. John Michel, Acting Director of the National Advisory Council for Career Education.

The Council has recently contracted with four individuals to prepare a paper entitled, The Efficacy of Career Education. As a state coordinator of career education, you can direct these individuals to career educators in your state who have made systematic efforts to evaluate the impact of their programs. The Council is particularly interested in the evaluation methodologies and measured results of programs whose objectives invalue:

1) the development of career awareness
2) the maintenance or improvement of academic achievement
3) the development of career decisionmaking skills.

Other program emphases such as career exploration, career preparation and job placement are also of interest to the Council in their effort to establish the full impact of the career education programs around the United States.

In the space below, please enter the names of projects you feel should be included in the Council's study, and supply the contact information and program classification requested. Mail your list of projects in the enclosed self-addressed envelope. In order for your input to be considered in this study, it is important that your input be received no later than AUGUST 15. Thank you for your cooperation.

PROGRAM OR PROJECT TITLE AND FUNDING SOURCE	NAME, ADDRESS AND PHONE OF CONTACT PERSON	AREA(S) EMPHASIZED IN PROGRAM'S OBJECTIVES

TUCSON PUBLIC SCHOOLS
ROBERT D. MORROW EDUCATION CENTER
P.O. BOX 4040
1010 EAST TENTH STREET
TUCSON, ARIZONA 857.7

September 9, 1975

Dear Career Educator:

Your state is recognized as one which has made significant progress in the implementation of comprehensive career education, and your state's career education coordinator has named your project as one which has made systematic efforts to measure the impact of career education. For these reasons I would like you to fill out the enclosed questionnaire about how your project is being evaluated and the results you have been able to document thus far.

The National Advisory Council for Career Education, which has commissioned this study, was established by Congress to assist practitioners with the implementation of career education programs and to recommend any needed changes in national career education policies and priorities. Establishing the efficacy of current career education efforts and disseminating promising evaluation strategies are some of the Council's first responsibilities, so your cooperation in responding to this questionnaire is very important.

Please return your completed questionnaire to me as soon as possible. Information about your project must be in my hands by September 26 in order for it to be included in the report to the Council. A stamped, self-addressed envelope has been enclosed to assist you in making a prompt reply.

Thank you for taking this opportunity to contribute to the improvement of strategies for evaluating career education and the formation of future national career education policy. I look forward to hearing from you soon.

Sincerely,

Sherrie Schager

Sherrie Schager
Research Specialist
Department of Research and Evaluation

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Enclosures

Survey of Career Education Evaluation Practices
for the
National Advisory Council for Career Education

1. Name of your project:

2. Location and sponsoring agency:

3. Source of funding:
   _____ Local or county
   _____ State
   _____ Federal (check source)
   _____ VEA, Part C
   _____ VEA, Part D
   _____ PL93-380, Title IV
   _____ Other:_____

4. No. of years in operation at end of 1974-75 year:_____

   (If no longer in operation, give last year:_____)

5. Grade level of participants:
   _____ Elementary
   _____ Middle or Junior High Sch.
   _____ High School

6. Which of these groups, if any, are given special attention?
   _____ Low-income
   _____ Ethnic minority
   _____ Female
   _____ Handicapped
   _____ Dropout or potential dropout

7. Program components:
   _____ Career awareness
   _____ Career exploration
   _____ Self-awareness
   _____ Career decision-making
   _____ Job placement & follow-up
   _____ Career preparation
   _____ Classroom instruction
   _____ Work experience
   _____ Occupations not requiring a B.A.
   _____ Occupations requiring a B.A. or more

8. For which of these areas does your project have written goals and/or behavioral objectives?
   _____ Competence in basic academic skills
   _____ Knowledge of good work habits
   _____ Positive work values and a desire to work
   _____ Competence in career decision-making, job hunting skills, job getting skills
   _____ Entry level occupational skills
   _____ Appropriateness of career decision, considering interests, abilities and career opportunities
   _____ Knowledge of continuing education opportunities
   _____ Successful placement in paid occupation, further education or vocation
   _____ Positive student attitude toward the program
   _____ Positive teacher or administrator attitude toward the program
   _____ Community knowledge and support of the program
   _____ Student knowledge of career clusters
   _____ Student knowledge of their interests and abilities
   _____ Other:

9. Percent of budget allocated for evaluation: _____%

10. Kind of evaluation assistance used:

_____ Internal evaluator
- _____ Full-time
- _____ Half-time
- _____ Less than half-time

_____ No evaluator is used

_____ External evaluator
- _____ University specialist
- _____ Private consultant
- _____ Other:_____

11. Frequency of evaluation reports:

_____ Monthly
_____ Two or three times a year
_____ Annually
_____ (NO formal evaluation reports)

12. Evaluation design(s) used:

_____ One-time, end-of-program measures administered to:
- _____ Program participants only
- _____ Program participants and a control group
- _____ Program participants and a comparison group

_____ Pre- and post-program measures administered to:
- _____ Program participants only
- _____ Program participants and a control group
- _____ Program participants and a comparison group

_____ Some other design (describe):

13. Summarize your project's evaluation efforts for 1974-75 (or the last year of operation) on the chart on the next page. Fill in each column as follows:

Expected Outcomes: Each of the areas covered by your objectives (the ones you checked in Question No. 8).

Measurable Result Expected: The behavioral or performance outcome expected which applies to the outcome listed in the first column.

Data Collection: The method or instrument you used to collect the data.

Actual Results: The actual results, described as quantitatively as possible.

An example is given to help you fill in the chart. Instead of, or in addition to filling out the chart, you may enclose a project evaluation report summary. Copies of evaluation instruments you have developed and found useful would also be appreciated.

Expected Outcome	Measurable Result Expected	Data Collection	Actual Results
(EXAMPLE) Positive work values and desire to work	90% of students in the program will give desired response to 10 of 12 items on Attitude Survey	"Attitudes toward Work" survey prepared by project	82% gave desired response to at least 10 survey items

TUCSON PUBLIC SCHOOLS
ROBERT D. MORROW EDUCATION CENTER
P.O. BOX 4040
1010 EAST TENTH STREET
TUCSON, ARIZONA 85717

September 17, 1975

Dear Research Director:

I am currently under contract with the U.S. Office of Education to prepare part of a report for the National Advisory Council for Career Education describing the nature of career education evaluation strategies currently in use throughout the country. You can help me greatly by taking a few minutes to answer my questions and sending me any relevant reports your district has prepared. Your objective viewpoint will be especially valuable in the preparation of an accurate and informative report for the Council.

I am particularly interested in knowing the objectives, evaluation designs, instrumentation and measured results of career education programs initiated since 1971-72 involving 6th through 12th grade students in (1) career exploration activities, (2) preparation for occupations, particularly those requiring post-secondary education, (3) job placement and (4) post-graduation follow-up studies.

Your prompt reply to the enclosed questions will be greatly appreciated. A stamped, self-addressed envelope is enclosed for your convenience.

Sincerely,

Sherrie Schager

Sherrie Schager
Research Specialist
Research Department

rs
Enclosures

PLEASE RETURN BEFORE SEPTEMBER 30

Survey of Career Education Evaluation Practices for the National Advisory Council for Career Education

Your Name and Position:
Address:

1. Please describe your district's efforts to systematically evaluate the effects of career education programs for middle/junior high school and high school students since 1971-72:

   _____ a. Our district did not conduct any career education programs of the type you describe between 1970 and the present.

   _____ b. Such career education activities have been conducted, but to my knowledge, were not formally evaluated.

   _____ c. Some career education activities of the kind you have described have been conducted and have been formally evaluated: (Check one.)

   _____ (1) Summary(ies)/abstract(s) of evaluation results enclosed.
   _____ (2) Full report(s) enclosed.
   _____ (3) Report(s) available, but at a cost of _____.
   _____ (4) No report(s) or report summary(ies) available.

   _____ d. Such a program is presently being conducted, but no evaluation results are available yet.

2. Your professional opinion regarding any of the following questions or related issues would be very much appreciated. (Please indicate whether or not your remarks may be quoted in the report to the National Advisory Council: _____yes; _____no.)

   a. What seem to be the positive outcomes of career education?
   b. Which goals seem to be achieveable through which mechanisms?
   c. What have been the most useful measures in judging the effectiveness of career education?
   d. Which strategies serve which populations best at reasonable cost?
   e. What are the relative costs, human and financial, of different approaches?
   f. Which occupations are being studied effectively within schools, and which seem to require learning outside school walls?

Please use the space below and the back of this page for your comments.
Thank you for your valuable assistance.

TUCSON PUBLIC SCHOOLS
ROBERT D. MORROW EDUCATION CENTER
P.O. BOX 4040
1010 EAST TENTH STREET
TUCSON, ARIZONA 85717

September 15, 1975

Dear

I am currently under contract with the U.S. Office of Education to prepare part of a report for the National Advisory Council for Career Education describing the nature of career education evaluation strategies currently in use throughout the country. You can help me greatly by sharing some of the knowledge and insights you may have gained in

My investigation is primarily concerned with the effects on junior high/middle school and high school students of programs involving career exploration, occupational preparation, job placement and student follow-up activities. I will be particularly interested in describing the objectives of such programs, the evaluation designs and instrumentation used and, of course, the measured results of these programs. In addition to any reports or materials you may be able to supply me pertinent to these issues, I would also like to have your professional opinion of the degree of progress you believe is being made in assessing the effectiveness of career education efforts. (Please indicate in your reply whether or not I may quote from your remarks in my report.)

Because your input will be especially valuable, I am looking forward to hearing from you soon.

Gratefully,

Sherrie Schager
Research Specialist
Research Department

Career Education Projects Who Responded to the Survey
(Listed alphabetically by location)

ARIZONA

1. Comprehensive Career Education Project
   Roosevelt School District #66
   Phoenix, Arizona

2. Pima County Developmental Career Guidance Project
   Pima County Superintendent of Schools
   Tucson, Arizona

CALIFORNIA

1. Ceres Model--Career Education Responsive to Every Student
   Ceres, California

2. Pupil Personnel Services
   Grossmont Union High School District
   Grossmont, California

*3. Comprehensive Career Education Model
   Los Angeles Unified School District
   Los Angeles, California

4. Orange County Consortium Career Education Model K-14
   Orange Unified School District
   Orange, California

*5. Santa Barbara Career Education Project
   Santa Barbara High School District
   Santa Barbara, California

COLORADO

Exploratory Program in Careers (EPIC)
Denver Public Schools
Denver, Colorado

HAWAII

* Hawaii Career Development Continuum K-14
  State Department of Education
  Honolulu, Hawaii

IOWA

*1. Career Information System of Iowa
   Iowa Department of Public Instruction
   Des Moines, Iowa

*2. Comprehensive Career Curriculum
   Des Moines Independent Community Schools
   Des Moines, Iowa

MICHIGAN

Human and Computer Assisted Career Achievement Skills Training Program
Pontiac Public Schools
Pontiac, Michigan

MINNESOTA

Project CEASE--Career Education and Staff Enhancement
North Saint Paul-Maplewood Schools
Maplewood, Minnesota

MISSOURI

Career Education Project
St. Louis Public Schools
St. Louis, Missouri

* Not included in analysis because no evaluation results were submitted.

NEW JERSEY

1. Asbury Park Career Development Education Project
   Asbury Park Board of Education
   Asbury Park, New Jersey

2. Career Education K-12
   Jersey City Board of Education
   Jersey City, New Jersey

*3. Millville School System K-12
   Millville, New Jersey

*4. New Brunswick Career Education Model
   New Brunswick, New Jersey

5. Career Education
   Passaic Public Schools
   Passaic, New Jersey

6. Governor's Career Development Project
   Perth Amboy High School
   Perth Amboy, New Jersey

7. Career Education
   Salem, New Jersey

NEW YORK

*1. Project Open Door to the World of Work
   Buffalo Board of Education
   Buffalo, New York

2. New York State Consortium for Career Education
   Syracuse, New York

NORTH CAROLINA

Career Based Curriculum Project
Union County Board of Education
Monroe, North Carolina

OHIO

1. Career Education Project
   Cincinnati Public Schools
   Cincinnati, Ohio

2. Career Development Program
   Dayton City Schools
   Dayton, Ohio

*3. Career Education
   Geneva Area City Schools
   Geneva, Ohio

4. Career Continuum
   Southwestern City Schools
   Grove City, Ohio

5. Career Development Project
   Lorain City Schools
   Lorain, Ohio

*6. Mansfield Career Development Project
   Mansfield City Schools
   Mansfield, Ohio

7. Willoughby-Eastlake Career Education Program
   Willoughby-Eastlake City School District
   Willowick, Ohio

OREGON

1. Portland Public Schools--Area I
   Portland, Oregon

2. Exemplary Career Education Project
   Springfield School District #19
   Springfield, Oregon

PENNSYLVANIA

1. Career Education Program
   Research for Better Schools
   Philadelphia, Pennsylvania

* Not included in analysis because no evaluation results were submitted.

PENNSYLVANIA (cont.)

2. Selected Functional Components of a Vocational Education Counseling System for Urban Youth
School District of Pittsburgh
Pittsburgh, Pennsylvania

TENNESSEE

* SPAN Model Career Education
Memphis City Schools
Memphis, Tennessee

TEXAS

* Career Education Alternatives and Strategies through a Regional Process
Education Service Center, Region 17
Lubbock, Texas

WASHINGTON

* Career Education K-12
Seattle School District
Seattle, Washington

WEST VIRGINIA

Experience Based Career Education
Appalachia Educational Laboratory
Charleston, West Virginia

WISCONSIN

1. Research and Development Project in Career Education
Eau Claire Joint District #5, et. al.
Eau Claire, Wisconsin

*2. Career Education Consortium
(no city given)

* Not included in analysis because no evaluation results were submitted.